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Memorandum

To: James S. Haklar, Ph.D., USEPA Region 2
Mark D. Fisher, LSRP, The ELM Group

From: Jason Schindler, Weston Solutions, Inc.

Date: May 22, 2017

Re: Quality Assurance Project Plan Addendum
Scrape Area X119 Supplemental Excavation Plan
Hatco Remediation Project
Fords, New Jersey

This memorandum and attachments serve as an addendum to the Quality Assurance Project Plan (QAPP) for the Hatco remediation project, most recently revised August 22, 2014. This addendum is intended to support supplemental excavation of the area designated "Scrape Area X119" at the Hatco site.

Scrape Area X119 was excavated as part of the Southeast Leg remediation project in 2014 and 2015. Surface soil samples collected in June 2015 from the perimeter of the primary excavation at Scrape Area X119 exhibited total polychlorinated biphenyl (PCB) concentrations above the remediation criterion of 2 milligrams per kilogram (mg/kg). In October 2015, shallow, one-foot deep excavations were completed along the edges of the Scrape Area to address these exceedances. The shallow excavations successfully removed the majority of the remaining surficial contamination along the edges. Post excavation samples were collected along the perimeter of the Scrape Area and were analyzed for PCBs. Samples from the southern perimeter were also analyzed for bis(2-ethylhexyl)phthalate (BEHP), to document removal of an isolated exceedance in that area. However, post-excavation samples from six perimeter locations exceeded the PCB criterion. Post-excavation samples from the southern-most location (X119-C8) also exceeded the BEHP soil criterion of 210 mg/kg. Additional soil samples were collected in March 2016 to determine the extent of surficial contamination. Based on the resulting data six discrete areas require further excavation. The sample locations and the horizontal and vertical extent of the six areas to be removed are depicted on Figure 1. Table 1 identifies the previous post-excavation samples that exceed the criteria, and the approximate dimensions and volume of the areas to be removed.
The area is located in a wetland which cannot be accessed using heavy equipment. Soils will therefore be excavated using hand-held equipment. The excavations will be backfilled with clean fill and seeded.

Large trees border several of the planned excavation areas. The trees will not be removed. Where major tree root systems extend into the planned areas, soil will be excavated by hand from around the roots to the extent practicable and replaced with clean soil.

Post-excavation soil samples are summarized on Table 2. Dedicated, disposable sampling trowels will be used to collect samples and to place the sample material directly into laboratory-prepared sample containers.

Sample collection and analysis will be performed in accordance with the protocols described in the QAPP revised August 22, 2014. Sample quantities, frequencies, analytical parameters and field quality control samples are summarized on Table 3.

ATTACHMENTS:
Figure 1. Scrape Area X119 Supplemental Excavations
Table 1. Supplemental Excavation Plan
Table 2. Post-Excavation Sampling Summary
Table 3. Quality Control Sampling Summary

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S-09
1-Foot Deep Perimeter Excavation
X119-SW-D-North-A-B-O-102915
X119-SW-D-North5-A-B-0-060815
X119-SW-D-North-C-D-0-060815
X119-SW-1-Ea-G-H-0-111514
X119-SW-C-North5-A-B-0-060815
X119-SW-C-North-A-B-O-102915
X119-SW-1-East-A-B-0-052215
X119-SW-C-North-C-D-0-060815
X119-SW-1-East-M-N-0-032715
X119-PE-D1-O-P-0-032715
X119-SW-C-North-K-L-032715
X119-SW-B-North-A-B-0-052215
S-10
X119-SW-B-North-K-L-0-032715
X119-PE-C2-O-P-0-032715
X119-PE-D2-O-P-0-032715
X119-SW-2-East-A-B-0-052215
X119-SW-2-East-M-N-0-032715
X119-SW-2-West-A-B-0-052215
X119-PE-B2-M-N-0-032715
X119-PE-A2-M-N-0-032715
X119-SW-2-West-K-L-032715
X119-PE-D3-M-N-0-032715
X119-SW-3-East-K-L-0-032715
X119-SW-3-East-A-B-0-052215
X119-HS1-PE-C3-Y-Z-0-052215
X119-PE-C3-X-Y-O-102815
X119-PEC-C3-O-P-0-032715
X119-HS1-SW-C3-West-R-S-0-050515
X119-SW-3-West-A-B-0-052215
Bottom Elevation = 12 ft MSL
X119-SW-3-West-K-L-032715
X119-PE-B3-M-N-0-032715
X119-SW-4-East-A-B-0-052215
S-11
X119-PE-C4-M-N-0-032715
X119-SW-4-East-K-L-032715
X119-PE-D4-M-N-0-032715
X119-SW-4-West-A-B-0-052215
X119-PE-B4-M-N-0-032715
X119-HS1-SW-D-North-W-X-0-052215 (Excavated)
Large Tree (Typ)
X119-SW-5-East-A-B-0-052215
X119-SW-5-East-K-L-0-040115
X119-PE-C5-M-N-0-040115
X119-PE-D5-Z-AA-0-103215
X119-HS1-SW-D5-East-R-S-0-050515 (Excavated)
X119-HS1-SW-5-West-W-X-0-052215
X119-HS1-SW-D5-West-R-S-0-050515 (Excavated)
X119-PE-B5-M-N-0-040115
X119-SW-5-West-A-B-0-102715
X119-SW-5-West-K-L-0-040115
Bottom Elevation = 8.3 ft MSL
X119-SW-5-West5-A-B-0-060815
X119-SW-5-West-C-D-0-060815
X119-HS1-SW-D-South-W-X-0-052215 (Excavated)
X119-SW-6-East-A-B-0-052215
X119-SW-6-East-K-L-0-040115
X119-5W: 1.5 CY
4 ft by 7 ft by 1 ft deep
X119-PE-E6-M-N-0-040115
X119-B6-05NW-A-B-0-032416
X119-PE-D6-M-N-0-031115
S-12
X119-SW-6-West-C-D-0-060815
X119-SW-6-West5-A-B-0-060815
X119-PE-C6-M-N-0-031115
X119-SW-B6-C-D-0-102715
X119-PE-B6-C-D-0-102715
X119-SW-E-South-K-L-0-040115
X119-B6-05SW-A-B-0-032416
X119-SW-6-West-K-L-0-033115
X119-SW-D-South-K-L-0-040115
X119-SW-E-South-C-D-0-060815
X119-ESO-10E-B-C-0-032316
X119-PE-D7-M-N-0-040115
X119-B6: 7.4 CY
10 ft by 10 ft by 2 ft deep
X119-ESO-05E-A-B-0-032416
X119-PE-C7-M-N-0-040115
X119-SW-E-South5-A-B-0-060815
X119-SW-E-South-A-B-0-102715
X119-SW-7-West-K-L-0-040115
X119-ES: 1.2 CY
4 ft by 8 ft by 1 ft deep
X119-SW-D-South-A-B-0-102715
X119-ESO-05S-A-B-0-032416
X119-7W-05W-A-B-0-032416
X119-SW-7-West-A-B-0-102715
X119-SW-D-South-C-D-0-060815
X119-SW-D-South5-A-B-0-060815
X119-DSO-05SE-A-B-0-032416
X119-7W: 1.2 CY
4 ft by 8 ft by 1 ft deep
X119-DS: 1.2 CY
4 ft by 8 ft by 1 ft deep
X119-7W-05S-A-B-0-032416
X119-DSO-05SW-A-B-0-032416
1-Foot Deep Perimeter Excavation
X119-SW-C-South-K-L-0-040115
X119-SW-C8-A-C-0-102715
X119-PE-C8-C-D-0-102715
X119-C8-E-F-0-032416
X119-C8-05SW-A-B-0-032416
X119-C8-05SE-A-B-0-032416
X119-C8-05SW-C-D-0-032416
X119-C8-05SE-C-D-0-032416
X119-C8: 5.9 CY
8 ft by 10 ft by 2 ft deep

0 5 10 20 Feet

Legend
- Post-Excavation Sample Location
- Supplemental Delineation Sample Location
- Recovery Sump
- Perimeter Excavation Limits
- Excavation Area Limits
- Supplemental Excavation Area
- Hot Spot Excavation Area
- Hatco Site Boundary
- Major Post-Excavation Contour
- Minor Post-Excavation Contour

NOTE:
1. Red label identifies sampling locations that have exceedances.

DRAWING TITLE:
Scrape Area X119
Soil Sample Locations

FIGURE: X

SCALE: 1 " = 5 '

DATE: May 2017

CLIENT NAME: Hatco Corporation

PROJECT NAME: Hatco Remediation

N W E S

REPORT DATE: April 2017

PROJECT MANAGER: J. Schindler

DRAWING: 20087_X119_PostEX_Add.mxd
PATH: P:\Hatco\GIS\MXD\2017_04_QAPP\

CHECKED BY: J. Schindler

REVISION No. 0

CONTRACT No.
DELIVERY ORDER NO.

WORK ORDER No. 13067.001.003.8030

DRAWN/MODIFIED BY: S. Poultney
DATE CREATED: 4/27/2017

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Table 1. Supplemental Excavation Plan
Scrape Area X119
Hatco Remediation Project
Fords, New Jersey

Area	Post-Excavation Sample Exceedances to be Removed	Sample Interval (feet below grade)	Concentration Remaining (mg/kg)		Contaminanat Criterion (mg/kg)		Dimensions (feet)			Volume (cubic yards)
			PCB	BEHP	PCB	BEHP	N-S	E-W	Depth	
X119-ES	X119-SW-E-South-A-B-0-102715	0.0-0.5	50	--	2	210	4	8	1	1.2
X119-DS	X119-SW-D-South-A-B-0-102715	0.0-0.5	5.7	--	2	210	4	8	1	1.2
X119-C8	X119-SW-C8-A-C-0-102715	0.0-0.5	48	330	2	210	8	10	2	5.9
	X119-PE-C8-C-D-0-102715	1.0-1.5	84	1,100	2	210				
X119-7W	X119-SW-7-West-A-B-0-102715	0.0-0.5	5.4	--	2	210	8	4	1	1.2
X119-B6	X119-SW-B6-C-D-0-102715	1.0-1.5	19	--	2	210	10	10	2	7.4
	X119-PE-B6-C-D-0-102715	1.0-1.5	31	--	2	210				
X119-5W	X119-SW-5-West-A-B-0-102715	0.0-0.5	5.5	--	2	210	4	10	1	1.5

Notes:

mg/kg:	Concentration in milligrams per kilogram dry weight basis
--:	Post-excavation sample not analyzed for BEHP
PCB	Total polychlorinated biphenyls
BEHP	Bis(2-ethylhexyl)phthalate
N-S	Excavation dimension trending north/south parallel to the Scrape Area X119 sidewall at this location
E-W	Excavation dimension trending east/west parallel to the Scrape Area X119 sidewall at this location

L:\13067 Hatco\5.0 QA-QC and Safety\5.1 Quality Plans\5.1.1 - QAPP and any Addenda\2017-05 QAPP Add X119\[2017-05 X119 Supp Excavation R1.xlsx]Table 1 Exc Plan

Table 2. Post-Excavation Sampling Summary
Scrape Area X119 Supplemental Excavation
Hatco Remediation Project
Fords, New Jersey

Area	Post-Excavation Sample Location	Post-Excavation Sample Depth Interval (feet)	Post-Excavation Sample Identification	Parameters
X119-ES	Bottom	1.0-1.5	X119-ES-PE-C-D-[DATE]	PCB
	Eastern Side Wall	0.0-0.5	X119-ES-Ea-A-B-[DATE]	PCB
	Western Side Wall	0.0-0.5	X119-ES-We-A-B-[DATE]	PCB
	Southern Side Wall	0.0-0.5	X119-ES-So-A-B-[DATE]	PCB
X119-DS	Bottom	1.0-1.5	X119-DS-PE-C-D-[DATE]	PCB
	Eastern Side Wall	0.0-0.5	X119-DS-Ea-A-B-[DATE]	PCB
	Western Side Wall	0.0-0.5	X119-DS-We-A-B-[DATE]	PCB
	Southern Side Wall	0.0-0.5	X119-DS-So-A-B-[DATE]	PCB
X119-C8	Bottom	2.0-2.5	X119-C8-PE-E-F-[DATE]	BEHP; PCB
	Eastern Side Wall	0.0-0.5	X119-C8-Ea-A-B-[DATE]	BEHP; PCB
	Western Side Wall	0.0-0.5	X119-C8-We-A-B-[DATE]	BEHP; PCB
	Southern Side Wall	0.0-0.5	X119-C8-So-A-B-[DATE]	BEHP; PCB
X119-7W	Bottom	1.0-1.5	X119-7W-PE-C-D-[DATE]	PCB
	Northern Side Wall	0.0-0.5	X119-7W-No-A-B-[DATE]	PCB
	Western Side Wall	0.0-0.5	X119-7W-We-A-B-[DATE]	PCB
	Southern Side Wall	0.0-0.5	X119-7W-So-A-B-[DATE]	PCB
X119-B6	Bottom	1.0-1.5	X119-B6-PE-C-D-[DATE]	PCB
	Northern Side Wall	0.0-0.5	X119-B6-No-A-B-[DATE]	PCB
	Western Side Wall	0.0-0.5	X119-B6-We-A-B-[DATE]	PCB
	Southern Side Wall	0.0-0.5	X119-B6-So-A-B-[DATE]	PCB
X119-5W	Bottom	1.0-1.5	X119-5W-PE-C-D-[DATE]	PCB
	Northern Side Wall	0.0-0.5	X119-5W-No-A-B-[DATE]	PCB
	Western Side Wall	0.0-0.5	X119-5W-We-A-B-[DATE]	PCB
	Southern Side Wall	0.0-0.5	X119-5W-So-A-B-[DATE]	PCB

Notes:

PCB Total polychlorinated biphenyls

BEHP Bis(2-ethylhexyl)phthalate

[DATE] Six digits identifying the month (Mo), day (Da) and year (Yr) of sample collection MoDaYr

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Table 3. Quality Control Sampling Summary
Scrape Area X119 Supplemental Excavation
Hatco Remediation Project
Fords, New Jersey

Matrix	Parameters	Field Samples	Sample Frequency	MS/MSD	Duplicates
Soil	PCB	24	4 per excavation	2	2
	BEHP	4	4 samples from 1 excavation	1	1

Notes:

PCB Total polychlorinated biphenyls by SW-846 Method 8082

BEHP Bis(2-ethylhexyl)phthalate by SW-846 Method 8270C

No field blank samples are required because samples will be collected using dedicated, disposable sampling tools.

Laboratory-blind duplicate samples will be collected at a frequency of one per 20 field samples

MS/MSD: Matrix spike/matrix spike duplicate samples will be collected at a frequency of one per 20 field samples

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